INSTALLATION INSTRUCTIONS for the *Asepsis 21™ Duo Swing Cart*

CE 0088

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INSTALLATION INSTRUCTIONS for the Asepsis 21™ Duo Swing Cart (Delivery System)

SECTION I - REQUIREMENTS

1. PHYSICAL REQUIREMENTS

Before installing, ensure that the physical requirements of the unit are met (See Figure 1). This unit is designed to be used as a rear or side delivery system.

2. ELECTRICAL REQUIREMENTS

Before connecting the line cord to an appropriate receptacle, make certain that the circuit is protected by a 15-amp circuit breaker for 120-VAC models, or a 7.5-amp breaker for 240-VAC models. Ensure that all wiring is grounded and all electrical codes are observed.

WARNING - Potential shock hazard with possible personal injury. To reduce shock hazard, observe all electrical codes.

3. WATER SUPPLY REQUIREMENTS

A 1/2 I.D. copper supply line, reduced to 3/8" O.D. copper tubing as near the shut-off valve as possible is required. The water pressure should be in the range of 30-50 psi. A suitable pressure reducing valve is essential for trouble free operation if the pressure exceeds the recommended range.

4. AIR SUPPLY REQUIREMENTS

A 1/2" I.D. copper supply line reduced to 3/8" O.D. copper tubing as near the shut-off valve as possible is required.

The air pressure must be between 75-100 psi at the valves. A pressure reducer should be installed if the pressure exceeds 100 psi.

For maximum life and trouble free operation, the air supply must be clean and dry. It is recommended that a moisture separator and filter be installed as near the connection as possible and accessible for periodic cleaning.

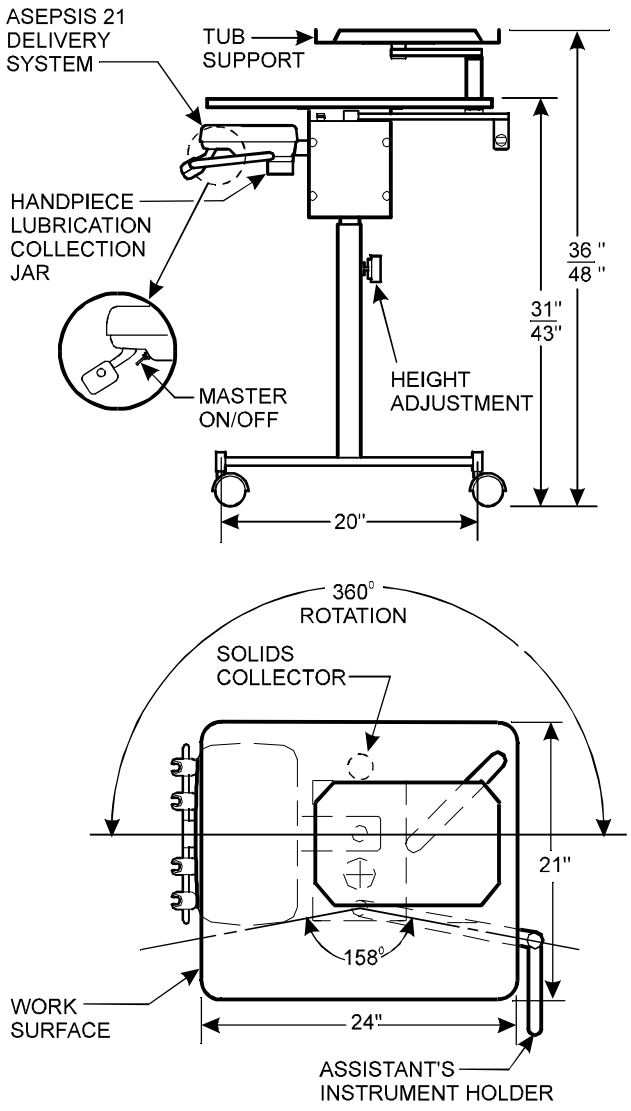

Figure 1

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SECTION II - INSTALLATION

1. UNPACKING THE CARTONS

The duo cart is shipped in a carton containing the following items:

- Duo swing cart with Asepsis 21 instrument head and assistant's instrumentation
- Tub support assembly
- Large work surface with hardware
- Utilities connection box (J box), hardware instructions and installation plan TP1191
- Installation instructions (this manual), an operator's manual, and warranty card

Check for signs of damage to the carton or to the contents. Make sure all items listed above are present. If there is any evidence of damage due to shipping or if any of the items are missing from the carton, notify the shipper at once. Be careful not to discard any small parts or instruction sheets with the packing material.

2. UTILITIES CONNECTION BOX (J BOX) INSTALLATION

To install the J box use the installation plan TP1191 supplied with the connection box. This plan may be used as a template to locate the utilities for connection. The installation of the utilities connection box should be performed by a qualified technician.

Please consider the following before beginning:

- The connection box can be installed anywhere in the room within the range of the 8 foot umbilical that will connect the box to the unit. Locate the box where the incoming service lines will not cause an obstruction.
- Air and water are the only services required unless a heated syringe or lighted handpieces are to be used.
- Waste lines, vacuum lines or auxiliary low voltage wiring are not necessary unless separate devices requiring these services are to be used.
- The location of the incoming services on the installation plan are suggestions and can be altered to suit the situation.

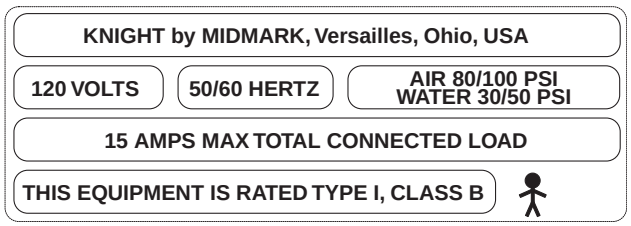
3. ELECTRICAL CONNECTIONS TO THE CONNECTION BOX (J BOX)

Domestic - Make the electrical connections to the J box as shown in Instruction TPW1487.

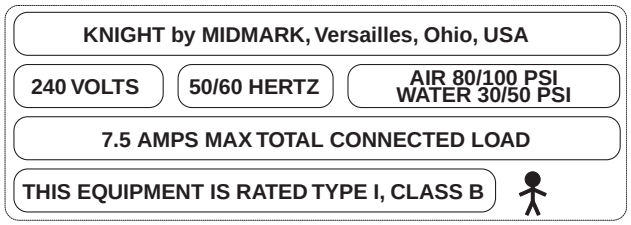
International - Make the electrical connections to the J box as shown in Instruction TPW1511. These J boxes have accessible fuses located on the front of the box.

DANGER: Turn off all electrical power at the power source before making primary electrical connections.

RATING FOR 120 VOLT UNIT


KNIGHT by MIDMARK, Versailles, Ohio, USA
120 VOLTS
50/60 HERTZ
AIR 80/100 PSI
WATER 30/50 PSI
15 AMPS MAX TOTAL CONNECTED LOAD
THIS EQUIPMENT IS RATED TYPE I, CLASS B

RATING FOR 240 VOLT UNIT


KNIGHT by MIDMARK, Versailles, Ohio, USA
240 VOLTS
50/60 HERTZ
AIR 80/100 PSI
WATER 30/50 PSI
7.5 AMPS MAX TOTAL CONNECTED LOAD
THIS EQUIPMENT IS RATED TYPE I, CLASS B

CONFORMS TO UL STD. 544
CERTIFIED TO CAN/CSA - C22.2 NO. 125-M1984

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SECTION II - INSTALLATION (CONT)

4. TUBING CONNECTIONS

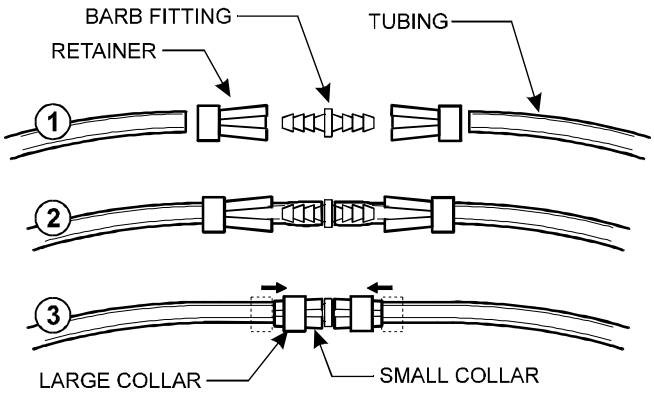
When connecting the umbilical tubings to the unit or other tubing, use the plastic retainers to secure the connection (Refer to Figure 2).

1/8" Tubing Connection

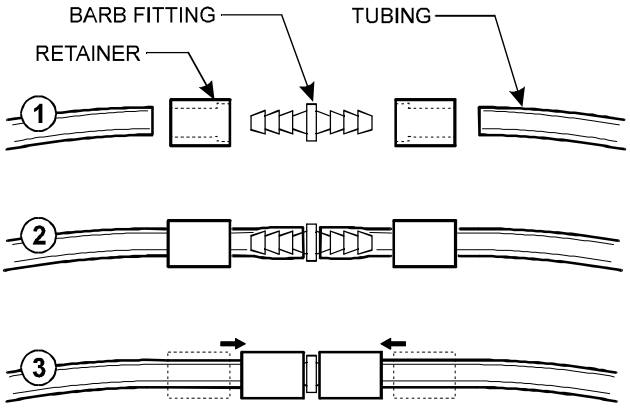
1. Slip the retainer (large end first) onto the tubing.
2. Push tubing onto the barb fitting and slide the retainer forward over the tubing on the barb fitting.
3. Break the large collar loose and slide it toward the fitting and over the small collar.

1/4" Tubing Connection

1. Slip the retainer onto the tubing with the large opening toward the end of the tubing.
2. Push the tubing onto the barb fitting.
3. Slide the retainer over the tubing on the barb fitting.



1/8" TUBING CONNECTION



1/4" TUBING CONNECTION

Figure 2

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SECTION II - INSTALLATION (CONT)

5. UMBILICAL TUBING CONNECTIONS TO THE UTILITIES CONNECTION BOX (J BOX)

Figure 3 shows the connections to be made inside the J box. Refer to installation plan 003-1190-00 supplied. This plan may be used as a template to locate the utilities for connection. The installation should be performed by a qualified technician.

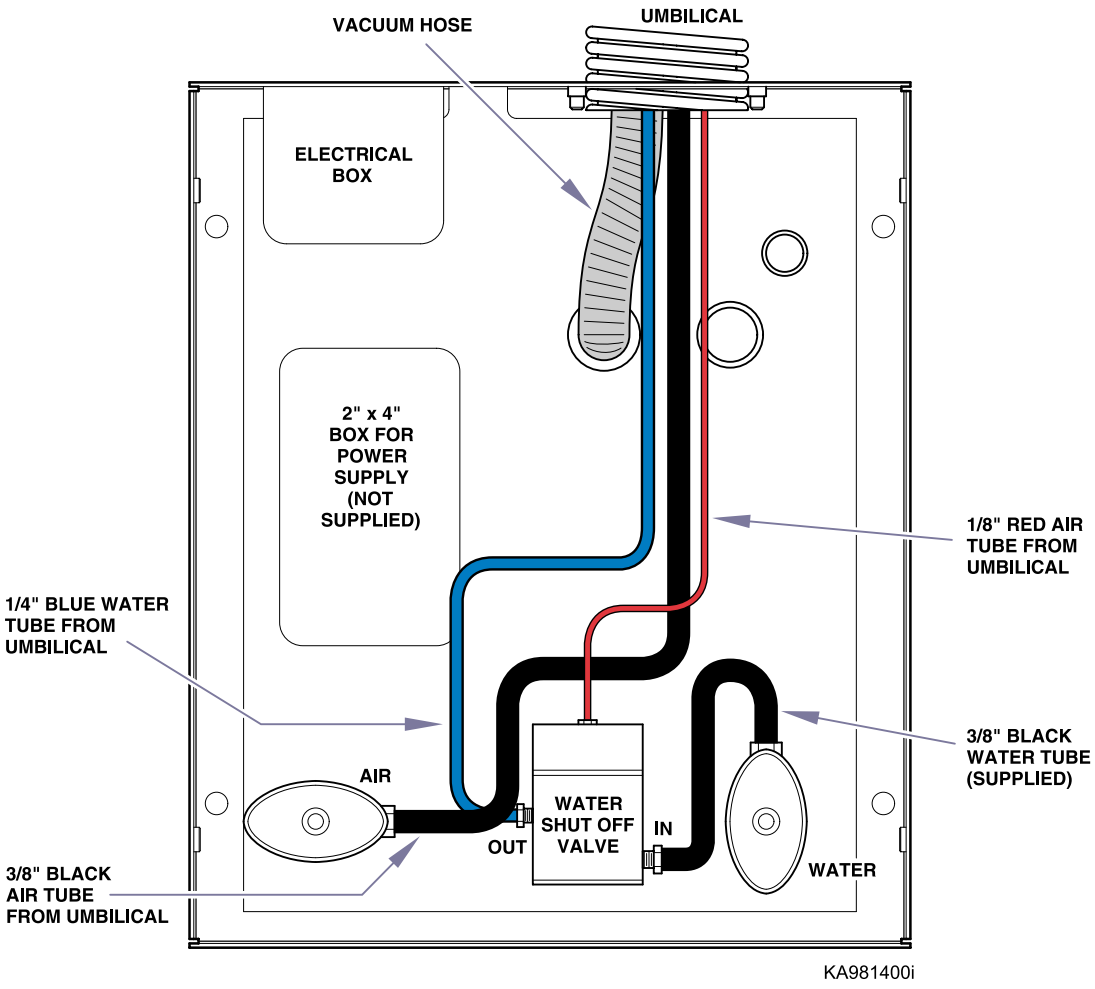

Figure 3

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SECTION III - CONTROLS

1. ASEPSIS 21 HANDPIECE DELIVERY SYSTEM CONTROLS LOCATED UNDER COVER

A complete set of handpiece and syringe adjustments are located directly under the magnetically held cover for protection against contamination. Lift up either back corner of cover for easy removal. All controls are labeled with symbols identifying their function. A description follows and their locations are identified below.

I-2-3 HANDPIECE COOLANT WATER VOLUME - Adjusts the amount of coolant water to each respective handpiece.

4-5-6 DRIVE AIR PRESSURE SETTING - Individual adjustments are provided - one for each respective handpiece. Use to set maximum handpiece pressure indicated on gage. Refer to handpiece manufacturer's specifications for proper setting.

7- SYRINGE AIR VOLUME ADJUSTMENT - Controls the volume of air to the syringe and effects air water spray pattern.

8- SYRINGE WATER VOLUME ADJUSTMENT - Controls the volume of water to the syringe and effects water spray pattern.

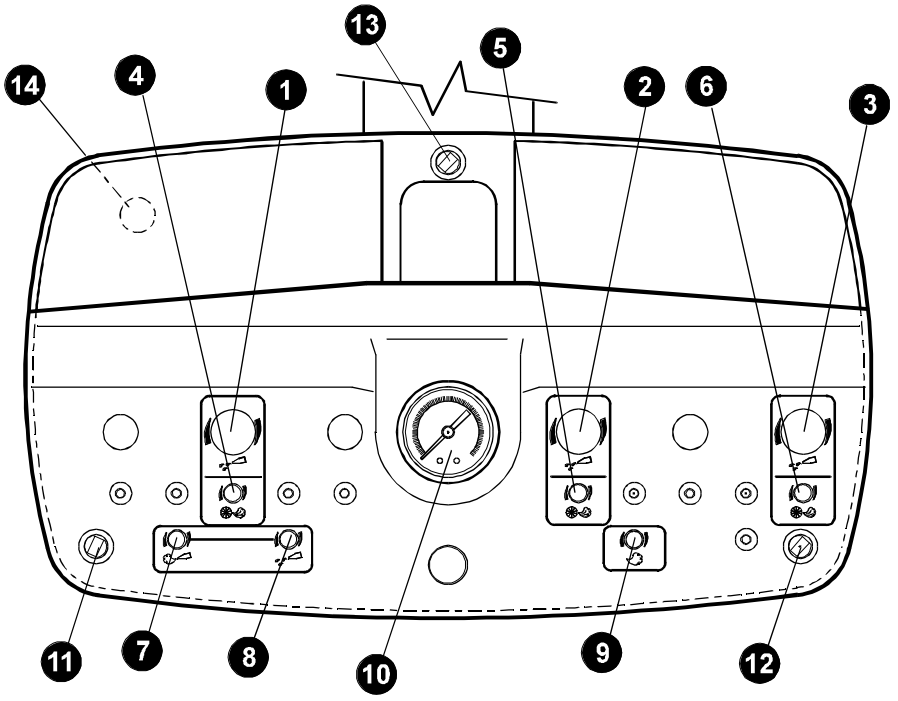
9- COOLANT AIR VOLUME ADJUSTMENT - This adjustment controls the volume of coolant delivered to each handpiece. It effects the spray pattern of air and water at the handpiece. If the handpiece has a coolant air connection in the handpiece itself, this adjustment will have no effect and can be completely shut off.

I 0- HANDPIECE PRESSURE GAGE - Indicates individual handpiece pressure when handpiece is operating.

11-12-13 MAGNETIC LATCHES - These hold the cover in place.

14- HANDPIECE COOLANT WATER FLUSH BUTTON - controls the coolant water flush valve. Located on the underside of the delivery head.

Figure 4 ASEPSIS 21 INSTRUMENT HEAD WITH TOP COVER REMOVED



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SECTION III - CONTROLS (CONT)

2. EXTERNAL CONTROLS AND FUNCTIONS

MASTER ON /OFF VALVE

Located on the bottom of the instrument head directly behind the handpiece holder bar support, this two position toggle control turns the main air and water on or off the utilities box. Up position is on.

TUB SUPPORT

Standard equipment on the duo cart, this support is mounted to the work surface on a swing arm. An instrument tray support is available as an option.

AUTOMATIC HANDPIECE ACTIVATION

The automatic kink valves are designed to permit activation of the selected handpiece when it is removed from its holder. Drive air will be delivered to the withdrawn handpiece when the foot control is depressed.

WET/DRY FOOT CONTROL

The disc-type foot control operates the selected handpiece at varying speeds depending upon the foot pressure applied to the disc. Positioning the coolant water selector toggle allows coolant water for wet cutting to be selected by the motion of the foot. Applying foot pressure to the disc will operate the selected handpiece and, if turned on, water spray.

WATER ON/OFF VALVE

Located on the foot control, this switch provides water for coolant spray to the handpiece when the switch is moved forward to the "On" position (toward blue dot) and the foot control is depressed (wet cutting). When the valve is in the "Off" position, water will not be delivered to any handpiece.

WATER OUTLET AND FLOW CONTROL

Located on the front panel of the unit, the water outlet provides water for hydrocolloid tubing or other accessories. The water is controlled by a flow control knob located next to the water outlet. Turning the knob clockwise will decreases water flow and counterclockwise increases the flow.

ASSISTANT'S INSTRUMENTATION

A saliva ejector, HVE and syringe are standard instrumentation on the duo cart. They are positioned on a swing around holder located opposite the Asepsis 21 instrument head.

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SECTION IV - PURGING AND TESTING THE SYSTEM

When the installation is complete you should purge the system to clear the tubing of any foreign material and to purge the air out of the water tubing. This also serves to test the equipment for proper function.

1. Before attaching the handpieces, turn on the air, water and vacuum to the utilities connection box.
2. Open the shut-off valves in the utilities connection box.
3. Turn on the master valve lever on the Asepsis 21 head.
4. Lift the cover off the Asepsis 21 head and turn the coolant water and coolant air volume controls adjustment knobs completely open.
5. Remove a handpiece hose from its holder.
6. Depress the foot control to operate the coolant water and drive air for 30 seconds.
7. Depress the coolant water flush button on the underside of the Asepsis 21 head to allow the water to flow for 30 seconds.
8. Repeat this procedure with each handpiece hose.
9. Operate the air and water for both doctor and assistant's syringes for 30 seconds.
10. Install the handpieces.
11. Set the coolant water and coolant air volume controls to the desired position.

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SECTION IV - FINAL CHECK LIST

When all the assembly and installation procedures are completed, the cart should be checked out in accordance with the following check list to ensure that assembly is complete and that all controls function properly.

- ☐ Check complete system for any air or water leaks.
- ☐ Check to make sure there is proper air and water flow to the handpieces.
- ☐ Check the Asepsis 21 handpiece delivery system for proper function.
- ☐ Check the syringes for proper function and water flow.
- ☐ Make sure that the unit has been cleaned and that all dirt and finger prints have been removed.
- ☐ Be sure the person who will operate the unit receives the Operator's Manual and any other appropriate information or instructions.
- ☐ If any optional equipment has been installed, make sure it is properly installed and functioning as intended.

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DECLARATION OF CONFORMITY

MIDMARK CORPORATION

Midmark Corporation declares that SW and S-21 Dental Units conforms to the applicable requirements of the Medical Device Directive 93/42/EEC, Annex V and VII.

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KA940600

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